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ABSTRACT

This study investigated the effects of different methods of delivering career counseling to college students. Three groups of community college students (N=148) undecided about their major received three levels of career development intervention: a life/career planning course, career testing with counselor interpretation, or no formal intervention. Both the life/career planning class and the completion of a career test battery assisted students in becoming more decisive about their career choice. Students in life/career planning classes were found to change more significantly in relation to career development than students who completed the career choice battery. This difference was attributed to three factors: (1) life/career planning counselors focused on personal growth as well as career development, while counselors who interpreted the career choice battery stressed the career decision making process; (2) the Career Decision Scale primarily measured one facet of career development, career decision making, while the Career Development Measure attempted to measure the entire career development process; and (3) career maturity is a function of personal development, an area that can only be explored in depth in an on- going class or counseling relationship. Although this study suggested that a life/career planning class provided more opportunity for career development, counselor interpretation of a career choice battery would be an acceptable alternative when departments are faced with money, time, and personal constraints. (LLL)

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A COMPARISON OF INTERVENTION STRATEGIES FOR UNDECIDED COLLEGE STUDENTS

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Abstract

Career counseling remains a critical need for many college students. The purpose of this study was to investigate the effects of different methods of delivering career counseling to college students. Three groups of community college students undecided about their major received three levels of career development intervention: a life/career planning course, career testing with counselor interpretation, or no formal intervention. Posttest measures yielded significant gains on the dependent variables of career decidedness and career development for students participating in the experimental groups. Control group students became more undecided, demonstrating career maturity patterns that grew more scattered as the semester progressed.

A COMPARISON OF INTERVENTION STRATEGIES FOR UNDECIDED COLLEGE STUDENTS

Career development remains a critical need for college students; yet literature reviews yield conflicting data on the need for career development as well as career development theories, goals, strategies, desired outcomes and delivery systems. A research study conducted at Seminole Community College compared the effectiveness of two major career development delivery systems, a life/career planning class and short-term one-to-one or small group counseling.

Research indicates that college students with unclear, unrealistic or uncertain academic goals are more likely to leave college than students with clearly defined career goals (Abel, 1966; Astin, 1975; Cope and Hannah, 1975; Pantages and Creedon, 1978; Beal and Noel, 1980). The 1984 Student Profile Report published by the American College Testing Program confirmed that an average of two out of every three students who took the ACT in 1983-1984 were unsure of their career choice. As a result of this research, more and more colleges use their career counseling services to "sell" their institution to prospective students (Johnson and Figler, 1984).

Many different delivery systems for career development have been advocated (Goldstein, 1974; Gysbers, 1984). Horan (1979) stressed the need for professional assessment, intervention and evaluation. Prediger (1980) stressed the importance of

following assessment interpretation with supplementary materials and activities to complement the interpretation process. Knefelkamp and Slepitza (1976) emphasized the need for counselors to assist students to develop an internal locus of control (1976). Johnson and Figler (1984) saw the college career center as a crucial student service, since it helps students gather and process data about themselves, career options and the real world in which all career decisions must be tested. Reemer's research (1983) confirmed the usefulness of counseling centers and placement officers in assisting college juniors and seniors to select careers and locate jobs. Carver and Smart (1985) demonstrated the ability of career exploration courses to provide freshmen with the opportunity to develop career maturity and decision making skills. Bolles (1990) and others produced self help books designed to let career seekers become their own counselors.

Assistance with career decision making is especially important to community college students, many of whom are non-traditional with unclear or short-term career aspirations (Helfgot, 1986). But community college resources are limited, particularly in the student services area, forcing practitioners to determine which of the many career development strategies are the most effective and cost efficient for the population they are designed to serve. Faced with limited resources and a spirited debate between staff members who favored one-to-one or small group career counseling and those who championed life/ career planning classes, counselors at Seminole Community

College designed a study to compare the effectiveness of both strategies.

METHODOLOGY

One of the twenty-eight colleges in the Florida Community College System, Seminole Community College (SCC) provides college credit, vocational technical and adult education opportunities for 26,000 Central Floridians each year. All counselors hold a minimum of a masters degree in counseling or a closely related field and complete extensive inservice training each year. Counselors participating in this study had at least five years experience at SCC, held Level II Myers-Briggs Type Indicator (MBTI) certification and had completed additional training in the Strong-Campbell Interest Inventory (SCII), the 16 Personality Factor (16PF), and the General Aptitude Test Battery (GATB). An important note is that counselors who taught life/career planning classes also facilitated the one-to-one and @mall group test interpretation sessions.

During mandatory orientation sessions, new college students who had not yet selected a career were asked to complete career maturity pretest instruments then given the opportunity to either register for a three credit life/career planning class or to complete a career decision test battery. Fifty-three students opted for the career decision battery, ninety-eight selected the credit class and fifty-one elected not to participate in either activity. Since counselors were

working with intact educational groups, randomization was not possible; therefore, a quasi-experimental design, the non-equivalent control group design (Stanley and Campbell, 1963), was selected. Although this design does not have the obvious research advantages afforded by randomization, many researchers advocate such an approach because it more accurately reflects real-life environments as well as the natural characteristics of learners (Snow, 1974).

Career Development Interventions

Career Decision Battery

Students who opted for the career decision battery completed a series of interest, ability, personality and career maturity instruments. Counselors selected this battery after an in-depth literature review and extensive field testing of potential instruments. Basically, the career decision process had five components.

1. Intake Interview - Students met with a counselor to discuss career development, the career decision making process, and their needs and goals. Demographic data were gathered at this time.

2. Test Selection and Administration - In collaboration with the student, the intake counselor selected appropriate measurement instruments on the basis of student needs, goals and

demographic characteristics. Usually, one instrument was selected from each of the following categories: personality, interest, value clarification, aptitude and career maturity. Assessment Center staff assisted students to complete each instrument.

3. Scoring and Counselor Assignment - Assessment Center staff either scored each instrument or sent it off campus to be computer scored (MBTI, SCII, CAI). Once all instruments completed by a student were scored, the Assessment Center Coordinator assigned the battery to a counselor for interpretation.

4. Interpretation/Facilitation of Career Development - Trained counselors worked with students in small groups (6-8 participants) or individually to interpret the results and help students understand how the psychological variables fit into various world-of-work models. The model for this interpretation was a facilitative one as advocated by Super (1957).

5. Follow up and Referral - After the career decision battery was interpreted, counselors assisted students to identify the next step in the career development process and continued to work with students as they completed units in CHOICES or DISCOVER, worked in the Career/Placement Center, took additional tests, participated in one or more job shadows, etc.

Life/Career Planning Class

Students who registered for the three credit life/career planning class also completed the career decision battery, units on self awareness, value clarification, occupational information and resources, computerized career information systems, goal setting, decision making and job search skills. All life/career planning sections were taught by counselors, each of whom used the same text, followed a standard course outline and adhered to non-punitive grading procedures.

CONTROL GROUP

Fifty-one college credit students who had not selected a major participated in neither the credit class nor the career decision test battery. These students served as a control group for the study.

CRITERION MEASURES

Two criterion measures were used in this study: the Career Decision Scale (Osipow, Carney, Winer, Yanico and Koschier, 1976) and the Career Development Measure, developed by the authors. Consisting of 19 Likert-type items, the Career Decision Scale (CDS) measures career decidedness. Questions 1 and 2 (CDS1) measure certainty of career choice and college major, while questions 3 through 18 (CDS2) allow the respondent to rate indecision factors. Item 19 encourages the respondent to clarify or to expand upon previous responses. CDS test/retest

correlations range from .70 to .90. Several studies report significant changes in student CDS scores after involvement in career development activities, as well as significant correlations between the CDS and other career development instruments (Osipow, 1980). Lower scores on items 1 & 2 indicate career indecision. Higher sums on items 3-18 indicate greater career indecision. Data for both items 1 & 2 and 3-18 were analyzed.

Consisting of 15 Likert-type items, the Career Development Measure (CDM) measures attitudes about careers, college majors and the degree of decisiveness for each attitude. The CDM has a test/retest reliability score of .89 and high content validity since items were developed and field tested by career counselors. Higher total scores in the test indicate less career development.

Criterion measures were administered before and after career development interventions. All undecided students completed the instruments during orientation. Students in life/career planning completed posttest instruments during the last two weeks of classes. Students completing the career decision battery took posttest instruments at the end of the term during which a counselor interpreted the battery and provided follow-up activities. Control group students were post-tested at the end of the term.

RESULTS

Data were complete on 148 students (60 life/ career planning, 45 career test battery and 43 control). Boxplots, nonparametric (chi square and sign test) and parametric (multivariate ANOVA and post hoc Tukey procedures) statistics were used to analyze the data. Boxplots give a graphic presentation of data results (Table I). The boxplots display the trends toward gains in career decision and career development for the experimental groups and in the opposite direction for the control group. In addition, the experimental group boxplots depict less range among experimental group members while control group members show greater range.

Chi square results were determined by comparing each student's pretest and posttest scores on each instrument and assigning results to one of three categories: 1) moved toward career decision, 2) stayed constant or 3) moved in an undecided direction. The Ns for each of these three categories for the pretest and posttest measurements are displayed in Table II along with chi square analysis.

The sign test (Bartz, 1988) allowed further nonparametric analysis. As with chi square, each student's pretest and posttest scores were assigned a sign: 1) "+" if movement was toward career decision, 2) "=" if scores remained the same, or 3) "-" if the student moved toward indecision. The Ns (students) were totaled for each category and tested for

significance using the sign test. Table III presents these data.

Because multiple treatment groups (life/career planning, career decision battery and control) and multiple dependent variables [CDS1 (questions 1-2) pre and post, CDS2 (questions 3-18) pre and post and CDM pre and post] were used, the multivariate analysis of variance (MANOVA) was used to help evaluate the data and yielded significant differences at the .01 level. To further examine the data, univariate analyses were computed for each dependent variable, CDS1, CDS2, and CDM obtaining significant (.01) F ratios for each. Table IV summarizes these analyses.

Since MANOVA yielded differences at the .01 level, attention was focused on comparing group means to identify the location of significant differences. Using Tukey's procedure, 16 pairs of means were compared to locate significant differences. Table V presents these data.

Career-Decision - When data were analyzed for career decision, large differences in the direction toward more decided occured for the two experimental groups (life/career planning Mean from 38.1 to 31.8; career test battery Mean from 38.5 to 31.1) while the control group moved in an undecided direction (Mean from 31.3 to 32.3) on the CDS 2.

Career Development - When data were analyzed for career development, large differences in the direction toward more career development occured for the two experimental groups (life/career planning Mean from 47.5 to 30.5; career test battery Mean from 50.8 to 35.5). The control group had a change in the opposite direction toward less career development (Mean from 38.4 to 40.9).

DISCUSSION

Data indicated that both a life/career planning class and the completion of a career test battery assisted students to become more decisive in relation to career choice. Data also indicated that students in life/career planning classes changed more significantly in relation to career development than students who completed the career choice battery. The authors attributed this difference to three factors: (1) life/career planning counselors focused on personal growth as well as career development, while counselors who interpreted the career choice battery stressed the career decision making process; (2) the CDS primarily measured one facet of career development, career decision making, while the CDM attempted to measure the entire career development process; and (3) career maturity is a function of personal development, an area that can only be explored in depth in an on-going class or counseling relationship. Although this study suggested that a life/career planning class provided more opportunity for career development, counselor interpretation of a career choice battery would be an

acceptable alternative when departments are faced with money, time and personnel limits.

One unexpected result of this study was the discovery that many students in the control group became more undecided as the semester progressed. CDS and CDM box plots graphically demonstrated that the career maturity pattern of students who elected not to participate in any career choice intervention became more scattered and less focused. Although a few control group students recorded an increase in some aspects of career maturity, most reported increased confusion and uncertainty in relation to selecting a major, understanding themselves and/or setting a direction in life. Chi square analysis of CDM results demonstrated that nearly two-thirds of the control group became less decided as the semester progressed, while MANOVA results approached significance in the indecision direction in two of the three areas studied (CDS2 and CDM). Apparently any counseling intervention was better than no counseling intervention, and undecided students who did not participate in some type of career development activity became even more undecided.

Undecided community college students responded positively to these two types of career counseling interventions. An ongoing life/career planning class correlated highly with significant increases in career maturity. In the absence of a counseling intervention, undecided community college students became more confused and less focused. These findings raise challenging questions for the counselor and the college

administrator: Should community colleges require undecided students to participate in some type of career counseling activity? Does the absence or limited availability of career counseling at some institutions contribute to the high drop-out rate among undecided students? Does retention start with career counseling? Additional studies are needed to discover the answers.

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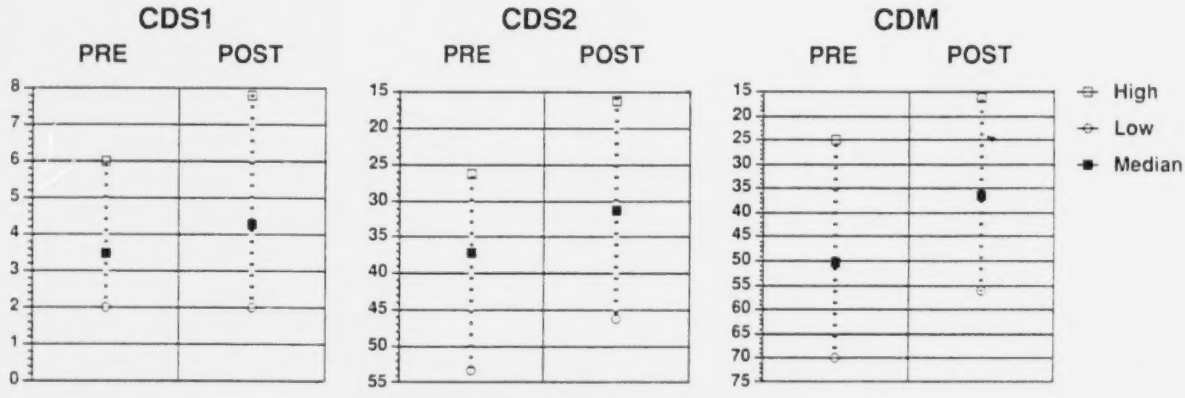
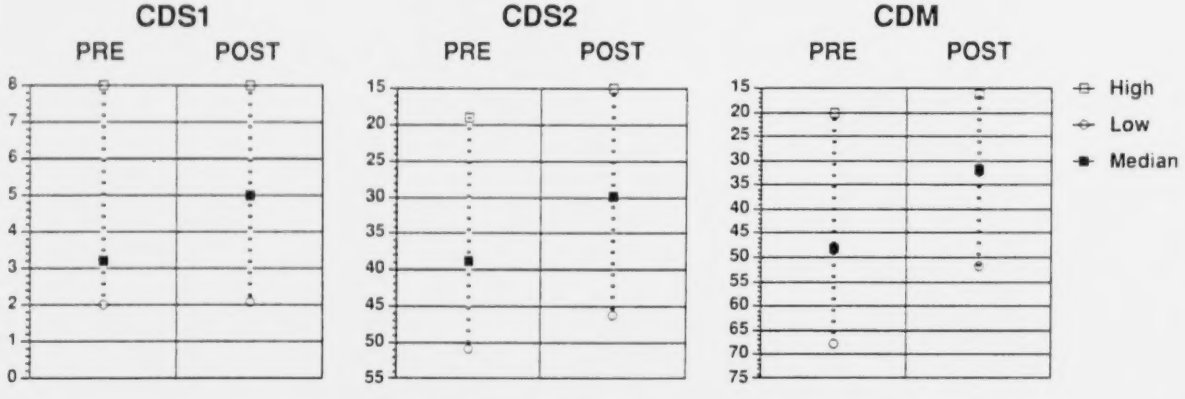
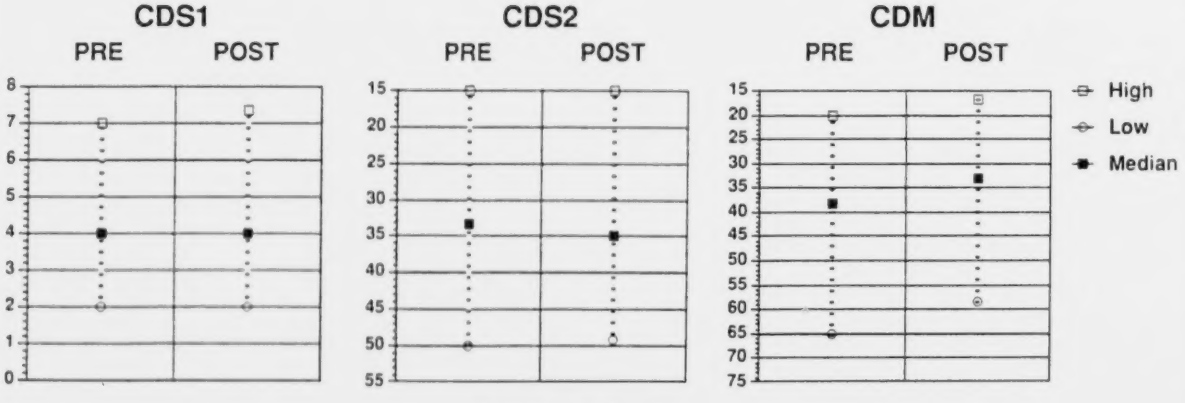
TABLE 1
BOX PLOTS



Career Test Battery Group



Life Career Planning Group



Control Group

TABLE 2
CHI SQUARE

CDS1 Certainty Scale

	More Decided	Stayed Constant	Less Decided
Career Test Battery (N=45)	29 (64.4%)	9 (20.0%)	7 (15.6%)
Life/Career Planning (N=51)	41 (80.4%)	5 (9.8%)	5 (9.8%)
Control (N=39)	16 (41.0%)	11 (28.2%)	12 (30.8%)

$Chi^2 = 71.69^{***}$ df = 4(R-1) (C-1)

CDS2 Indecision scale

	More Decided	Stayed Constant	Less Decided
Career Test Battery (N=45)	33 (73.3%)	2 (4.4%)	10 (22.2%)
Life/Career Planning (N=51)	34 (66.7%)	4 (7.8%)	13 (25.5%)
Control (N=39)	13 (33.3%)	4 (10.3%)	22 (56.4%)

$Chi^2 = 74.88^{***}$ df = 4(R-1) (C-1)

CDM

	More Decided	Stayed Constant	Less Decided
Career Test Battery (N=45)	40 (81.6%)	3 (6.2%)	6 (12.2%)
Life/Career Planning (N=51)	57 (96.6%)	0 (0%)	2 (3.4%)
Control (N=39)	15 (35.7%)	0 (0%)	27 (64.4%)

$Chi^2 = 184.2^{***}$ df = 4(R-1) (C-1)

* p sign .05
** p sign .01
*** p sign .001

TABLE 3
THE SIGN TEST

CDS1 Certainty Scale

	+	=	-	N	x
Career Test Battery (N=45)	29	9	7	36	7*
Life/Career Planning (N=51)	41	5	5	46	5**
Control (N=39)	16	11	12	28	12

CDS2 Indecision scale

	+	=	-	N	x
Career Test Battery (N=45)	33	2	10	43	10*
Life/Career Planning (N=51)	34	4	13	47	13*
Control (N=39)	13	4	22	35	13

CDM

	+	=	-	N	x
Career Test Battery (N=49)	40	3	6	46	6**
Life/Career Planning (N=59)	57	0	2	59	2**
Control (N=42)	15	0	27	42	15

* p sign .05
** p sign .01
*** p sign .001

TABLE 4
MANOVA

CDS1

	PRE CDS1		POST CDS1	
	$\bar{X}$	SD	$\bar{X}$	SD
Career Test Battery	3.36	1.37	4.36	1.65
Life/Career Planning	3.49	1.59	5.24	1.88
Control	4.27	1.38	4.55	1.95

Source of Variance	DF	SS	MS
Between Groups	5	124.07	24.81
Within Groups	273	764.00	2.80
TOTALS	278	888.07	

Univariate F = 8.70**

CDS2

	PRE CDS2		POST CDS2	
	$\bar{X}$	SD	$\bar{X}$	SD
Career Test Battery	38.56	6.61	31.16	8.73
Life/Career Planning	37.26	7.60	31.60	8.70
Control	32.05	8.53	33.33	10.52

Source of Variance	DF	SS	MS
Between Groups	5	2,347.70	469.50
Within Groups	273	20,037.00	73.40
TOTALS	278	22,384.70	

Univariate F = 6.40**

CDM

	PRE CDM		POST CDM	
	$\bar{X}$	SD	$\bar{X}$	SD
Career Test Battery	48.94	11.67	35.47	11.21
Life/Career Planning	46.98	10.75	30.34	9.60
Control	37.88	10.50	41.34	14.76

Source of Variance	DF	SS	MS
Between Groups	5	13,557.70	2,711.50
Within Groups	293	38,644.00	131.90
TOTALS	298	52,201.70	

Univariate F = 20.6**

MANOVA RATIOS	
	F
Pillais	10.970**
Hotellings	13.353**
Wilks	12.153**

* p sign .05
** p sign .01
*** p sign .001

TABLE 5

TUKEY'S PROCEDURE / COMPARING MEANS

CDS1

	$\bar{X}_{+}$	$\bar{X}_{++}$	q
Career Test Battery Pretest + & Posttest ++	3.36	4.36	4.02*
Life/Career Planning Pretest + & Posttest ++	3.49	5.24	7.65**
Control Pretest + & Posttest ++	4.27	4.55	1.08
Career Test Battery Posttest + & Life/Career Planning Posttest ++	4.36	5.24	3.71
Life/Career Planning Posttest + & Control Posttest ++	5.24	4.55	2.80
Career Test Battery Posttest + & Control Posttest ++	4.36	4.55	.75

CDS2

	$\bar{X}_{+}$	$\bar{X}_{++}$	q
Career Test Battery Pretest + & Posttest ++	38.56	31.16	5.78***
Life/Career Planning Pretest + & Posttest ++	37.26	31.60	4.85***
Control Pretest + & Posttest ++	32.05	33.33	.95
Career Test Battery Posttest + & Life/Career Planning Posttest ++	31.16	31.60	.37
Life/Career Planning Posttest + & Control Posttest ++	31.60	33.33	1.37
Career Test Battery Posttest + & Control Posttest ++	31.16	33.33	1.65

CDM

	$\bar{X}_{+}$	$\bar{X}_{++}$	q
Career Test Battery Pretest + & Posttest ++	48.94	35.47	8.21***
Life/Career Planning Pretest + & Posttest ++	46.98	30.34	11.13***
Control Pretest + & Posttest ++	37.88	41.34	1.95
Career Test Battery Posttest + & Life/Career Planning Posttest ++	35.47	30.34	3.27
Life/Career Planning Posttest + & Control Posttest ++	30.34	41.34	6.70***
Career Test Battery Posttest + & Control Posttest ++	35.47	41.34	3.43

* p sign .05
** p sign .01
*** p sign .001